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June 17, 2019

BY ELECTRONIC DELIVERY

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington D.C. 20554

Re: Permitted Oral *Ex Parte* Notice
Wireless E911 Location Accuracy Requirements
PS Docket No. 07-114

Dear Ms. Dortch:

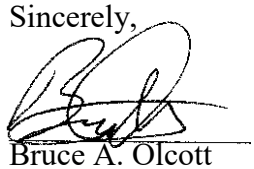
On June 14, 2019, representatives of NextNav, LLC ("NextNav") participated in a meeting with Randy Clarke, acting legal advisor for Commissioner Geoffrey Starks. Participating in the meeting on behalf of NextNav were Gary Parsons, Chairman; Ganesh Pattabiraman, CEO and Co-Founder; Bruce Cox, Senior Director, Regulatory & Public Safety; and the undersigned.

The primary purpose of the meeting was to introduce the NextNav location technology to Mr. Clarke and the highly accurate capabilities that have been demonstrated for NextNav's technology in identifying the vertical location of wireless callers inside large buildings. The parties also discussed the evolution of the Commission's wireless location proceeding, including its more recent focus on vertical location requirements. In addition, the parties discussed the multiple rounds of independent testing that have been completed on vertical location technologies and the dispatchable location approach.

The NextNav representatives emphasized that, based on the extensive record that the Commission has developed over the years on the critical public safety need for a vertical location requirement and the capabilities of location service vendors to reliably provide highly accurate vertical location information, the Commission should promptly adopt a wireless vertical location requirement of +/-3 meters for 80% of wireless calls from z-axis capable handsets.

The attached presentation was distributed during the meeting and formed the basis for some of the discussion. Please contact the undersigned if you have any questions about this matter.

Sincerely,



Bruce A. Olcott

NextNav, LLC

Position, Navigation and Timing Services

June 2019

NextNav's Metropolitan Beacon System ("MBS")

- Overlay network dedicated to position, navigation and timing ("PNT")
  - Includes X,Y & Z axis and timing, with unique, proven floor-level vertical and horizontal accuracy
- Serves indoor and urban areas - complementary to GPS
- Wide-area coverage with unlimited capacity – can cover entire metro
- Long-range, low-cost broadcast beacons placed on cell towers and rooftops – not building specific
  - Similar to GPS in that it serves all applications
- Deployed and managed to deliver 'Mission Critical' location with multi-layer reliability and immune to GPS disruptions
  - Network & beacon redundancy
  - Battery backup to ensure continuity during power outage
  - Encrypted signal
  - Resistant to GPS outage
- Designed to be integrated into mass market devices
- Proven "best in class" in various CTIA/ATIS, FCC-sponsored trials

MBS is essentially a network of low-cost terrestrial "satellites" broadcasting from roof-tops and towers

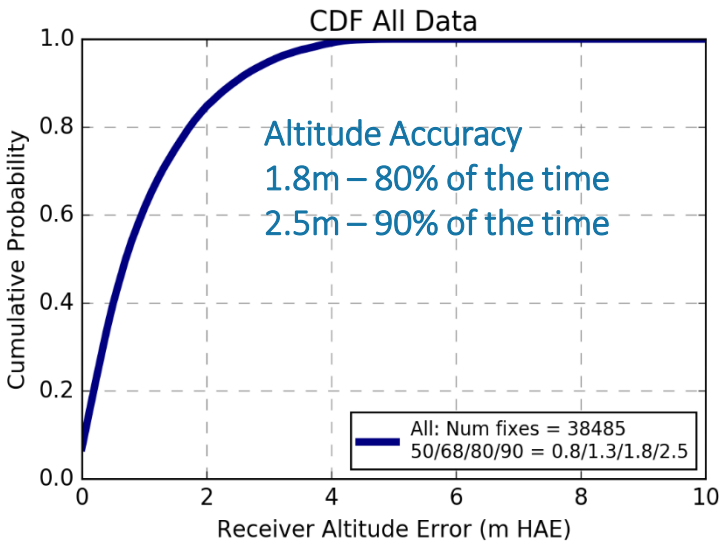
MBS Ecosystem

- MBS is a standards-based technology
  - Standards support in 3GPP (Rel. 13 and later) and OMA (SUPL 2.0.3)
  - CTIA OTA Test v 3.8 supports requirements for MBS
  - ICD available under FRAND terms, published with ATIS
- Technology licensed and implemented by multiple IC manufacturers
  - Licenses offered on a royalty-free basis
- Supported as another constellation on E-SMLC and SUPLC Servers; MBS capable servers developed by several Tier 1 eSMLC providers
- Leading mass-market barometric pressure sensors support altitude service
- Rhode & Schwarz test equipment supports MBS in latest software releases

Independent Industry Validation

- MBS has undergone extensive indoor, blind independent tests both by the Government and Multiple Tier 1 US operators
- Tests conducted:
  - FCC/CSRIC tests in 2012/2013 – provided X-Y-Z results
  - CTIA/ATIS tests in Fall 2016 – validating Horizontal performance for 911 (also provided Z axis results)
  - CTIA/ATIS tests in Spring 2018 – validating Vertical performance
- Cumulatively more than 155,000 911 style test calls, spread across 300+ test points
- Commercial off-the-shelf phones were used for vertical tests, and commercial equivalent phones were used for horizontal tests
- In all tests MBS demonstrated to be best in class system that exceeded FCC's metrics on 911 and Public Safety's objective on 'Z'

Vertical CDF Results based on latest CTIA Z-Axis Testbed



Vertical Location Rule – FCC Development